

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/823,305  
Filing Date: April 13, 2004  
Appellant: Scott Dewey  
Group Art Unit: 2838  
Examiner: Richard V. Muralidar  
Title: GIANT MAGNETORESISTIVE CELL MONITORING  
Attorney Docket: GP-303515

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Mail Stop Appeals  
Commissioner of Patents  
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**APPELLANT'S REPLY BRIEF**

This is Appellant's Reply Brief in response to the Examiner's Answer mailed April 2, 2008 and the Examiner's Answer mailed May 8, 2008, which appear to be the same.

Appellants argued on page 8 of their Fourth Appeal Brief filed December 12, 2007 that the Examiner has failed to explain why one of ordinary skill in the art would use the current detecting device taught by Yoshino in the fuel cell voltage detecting device taught by Barbetta, and therefore has used improper hindsight. The Examiner has addressed this argument on pages 20 and 21 of the Examiner's Answer essentially stating that one of skill in the art would combine the teachings of Yoshino and Barbetta to provide a voltage

monitoring device in a fuel cell system that accurately reads the current/voltage of each fuel cell in a fuel cell stack. Appellant acknowledges that there are benefits to using the Wheatstone bridge of the claimed invention to measure the voltage of each fuel cell in a fuel cell stack, and those benefits are what led the inventor to invent the claimed invention. However, what Appellant is saying that the Examiner has not done is explain why one of skill in the art would be motivated to combine the teachings of Yoshino and Barbetta within the legal requirements of *prima facie* obviousness. In other words, what about the specific teachings of Barbetta and Yoshino would lead a person of skill to combine these teachings. Once one skilled artisan has suggested that there are benefits to employing a Wheatstone bridge to measure fuel cell voltages, then it is improper for the next skilled artisan to say, "yes those benefits are clear to me." This is what impermissible hindsight refers to.

Appellant has also argued that the Examiner's eight step process for arriving at obviousness based on the teachings of Barbetta and Yoshino in and of itself makes the obvious analysis outside the scope of *prima facie* obviousness. The Examiner has addressed this argument on pages 23-28 of the Examiner's Answer in a lengthy discussion. The Examiner states on page 25 of the Examiner's Answer that the length of the motivation is not an indication that hindsight was used. Appellant respectfully submits that the length of the motivation is a good indication that hindsight was used. Appellant submits that almost every invention builds on knowledge already available in the art. Appellant further submits that once an invention is known to a skilled artisan, then going through a series of mental steps as to how the inventor arrived at the invention in a reasoned analysis can be made for any invention. So, Appellant submits that the eight step process suggested by

the Examiner is more evidence that the invention is unobvious than it is that the invention is obvious. Whether each step in the process is correct is not what's important. What is important is the number of mental steps that need to be gone through to arrive at the invention.

The Examiner has attempted to minimize Appellant's argument concerning the eight step process by stating that Appellant's reasoning is that the eight steps make the motivation "too long." Appellant respectfully submits that the Examiner is right, it is too long.

Dependent claims 5, 11 and 18 claim a polarity reverser that reverses the polarity of the current from the fuel cells before the current is applied to the conductor so that the current propagating through the conductor is always in the same direction. The polarity reverser 102 that these claims are based on is discussed at the bottom of page 2 of the Appeal Brief.

As stated by the Examiner on pages 28 and 29 of the Examiner's Answer, Barbetta has the hardware to provide polarity reversal, but does not actually perform polarity reversing. Appellant submits that this means that Barbetta does not teach or disclose a polarity reverser as claimed.

The Examiner states on pages 29 and 30 of the Examiner's Answer that the Yoshino Wheatstone bridge only allows current to flow in one direction, but does not teach a polarity reverser as claimed. Appellant submits that this means that Yoshino does not teach or disclose a polarity reverser as claimed.

Chen teaches a reverse-polarity detection circuit that detects whether the terminals of the Chen charging device have been properly connected to the terminals of the battery. Appellant submits that a reverse-polarity detection circuit is not a polarity reverser, so Chen also does not teach a polarity reverser as claimed.

Thiele talks about the well known phenomena of cells in a battery sometimes entering a polarity reversal situation. Appellant submits that this has nothing to do with a polarity reverser as claimed.

Appellant respectfully submits that if none of these four references teaches anything about a polarity reverser as claimed, then the combination of these four references also cannot teach a polarity reverser as claimed. The Examiner has suggested that Appellant has used a piecemeal analysis to argue this point. However, Appellant submits that the Examiner has not shown that any of these four references includes any part of a polarity reverser as claimed that when combined would teach one of ordinary skill in the art a complete polarity reverser. Appellant is arguing that none of these references teach or suggest anything about a polarity reverser as claimed.

Appellant acknowledges that the legal analysis of *prima facie* obviousness has been revised per KSR International Co. v Teleflex, Inc., 550 US \_\_\_, 82 USPQ2d 1385 (2007). However, Appellant submits that the discussion in the Appeal Brief and above is still relevant to show that the Examiner has not established a *prima facie* case of obviousness. MPEP 2143 gives exemplary rationales for establishing obviousness other than the teaching, suggestion or motivation analysis, which was dominant prior to the KSR decision.

Appellant submits that those exemplary rationale do not apply to this situation where the teachings of Barbetta and Yoshino as discussed in the Appeal Brief establish a *prima facie* case of obviousness.

Respectfully submitted,  
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